REMARKS

Applicants respectfully request reconsideration of the present application based on the foregoing amendments and the following remarks. Applicants herein add claims 50 - 64. Upon entry of the amendment, claims 1-6 and 8-64 will be pending in the application.

Claim Objections

The examiner objected to claim 1 because the phrase "...register file separate from and in addition to a description of the core register file..." was allegedly unclear, and the examiner requested clarification of the claim in view of the specification.

However applicants respectfully submit that, to one skilled in the art, the language of claim 1 is clear in view of the specification. For example, on page 13, lines 3-5, a construct is discussed that allows a user to "designate a register file declared with `regfile` in addition to the core register file." Further, on page 13, line 35 - page 14, line 2 of the specification: "[a] 16-entry, 8-bit register file is created ... and two instructions are defined that operate on these registers." Accordingly, it is believed that one skilled in the art, reading claim 1 in view of the specification, would clearly understand the phrase "register file separate from and in addition to a description of the core register file." The examiner is invited to review this example described above and other examples in the specification.

Because the language of the claim is considered clear in view of the specification to one skilled in the art, it is respectfully submitted that no further amendment to claim 1 is required, and the objection to the claim should be withdrawn.

Claim Rejections Under 35 U.S.C. § 103(a)

The examiner rejected claims 1-6, 8-48 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,477,697 Killian et al. ("Killian") in view of U.S. Patent No. 6,658,578 to Laurenti et al. ("Laurenti"). For reasons set forth more fully below, this rejection is respectfully traversed as to all claims.

The rejection of all claims depends on subject matter allegedly found in Killian. However, the examiner's reliance on Killian as prior art under 35 U.S.C. § 103(a) is misplaced

because, at all relevant times, Killian and the present invention were commonly owned by Tensilica, Inc. of Santa Clara, CA (US). Meanwhile, Killian can only be relied upon as prior art under 35 U.S.C. § 102(e). Accordingly, the rejection based on Killian is improper under 35 U.S.C. § 103(c). As explained in MPEP 706.02(b):

> References that are only prior art under 35 U.S.C. 102(e), (f), or (g) and applied in a rejection under 35 U.S.C. 103(a) are subject to being disqualified under 35 U.S.C. 103(c) if the reference and the application were commonly owned, or subject to an obligation of common assignment, at the time the invention was made.

As set forth above, the Killian reference qualifies as prior art only under 35 U.S.C. 102(e). In particular, the Killian patent issued on Nov. 5, 2002, on an application filed on May 28, 1999. The current application was filed on February 17, 2000, before the issue date of Killian. Since the current invention is not solely disclosed or described in the Killian patent, the examiner based the rejection on obviousness under 35 U.S.C. 103(a) citing Killian in view of Laurenti.

At all relevant times, the rights to both Killian and the present application were owned or controlled by Tensilica, Inc., as is evidenced by assignments filed and recorded in both applications. Because of these recorded assignments, the common ownership of these inventions by Tensilica, Inc. cannot be disputed and is presumptively established. Without additional evidence of lack of common ownership to overcome such a presumption, therefore, Killian is conclusively disqualified as prior art under 35 U.S.C. 103(c).

The Office Action correctly fails to allege that Laurenti alone discloses or suggests each and every limitation of any rejected claim. Therefore, because the use of Killian as prior art is in error, the § 103(a) rejection of each and every claim should be withdrawn.[1]

Claim Rejection Under 35 U.S.C. § 102(e)

In the Office Action, the examiner rejected claim 49 under 35 U.S.C. §102(e) as being unpatentable over Killian. For reasons set forth more fully below, this rejection is respectfully traversed.

Independent claim 49 requires:

> [a] hardware simulation means for executing a hardware description of an extensible processor;
> [b] software simulation means for executing a software reference model of the extensible processor; and
> [c] cosimulation means for operating the hardware simulation means and the software simulation means and comparing results of simulations therefrom to establish correspondence between the hardware description of the extensible processor and the software reference model of the extensible processor.

The Office Action points to col. 13, lines 56 – 64 and FIG. 8 in Killian that allegedly teach this subject matter. However, this passage of Killian does not explicitly or implicitly teach [a] a hardware simulation means, [b] a software simulation means or [c] a cosimulation means for operating the hardware simulation means and the software simulation means, as explicitly required by claim 49.

According to one example provided in the specification, "[c]o-simulation is the process of running the RTL [i.e. a hardware simulation means] and the reference model [i.e. a software simulation means] in parallel, and comparing the architecturally visible states defined in the ISA at specified boundaries." Also: "[t]he cosimulator (hereinafter 'cosim') acts as the synchronizer and the gateway between the RTL simulator, the ISS, and multiple other monitor/checker tasks that are executed in parallel." The drawing in FIG. 14 further teaches one example of a process of running the RTL and ISS involving an RTL simulator. The specification further states that an advantage of cosim is that "it provides easier debugging of failing diagnostics" and it "causes the simulation to stop at (or near) the cycle where the problem appeared, which significantly reduces debugging time and effort." Cosimulation is therefore mostly relevant to development efforts.

[1] Applicants further do not concede that the subject matter of any rejected claim is taught or suggested by the alleged combination of Killian with Laurenti. However, given that the use of Killian as prior art is improper, the basis for this disagreement need not be explained here.

The cited passage in Killian, meanwhile, does not describe any development features at all, much less a hardware simulation means, a software simulation means or a cosimulation means as required by claim 49. Rather, the Killian passage and related diagrams describe logic that has been actually implemented in hardware. Specifically, the described logic is required to automatically restore and load the values of states to and from data memory in a manner consistent with user register specifications. The passage in Killian thus deals with the comparison of state information in the context of a configured and operational processor, and not a description of a processor that is being simulated in either hardware or software.

For at least these reasons, claim 49 patentably defines over Killian and the § 102 rejection of this claim should be withdrawn.

Newly Added Claims

Claims 50-64 have been added to more fully describe the patentable features of the present invention as described in the originally-filed specification.

Conclusion

All objections and rejections having been addressed, and in view of the foregoing, the claims are believed to be in form for allowance, and such action is hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, s/he is kindly requested to contact the undersigned at the telephone number listed below.

CHARGE STATEMENT: The Commissioner is hereby authorized to charge fees that may be required relative to this application, or credit any overpayment, to our Account **50-2213,** Order No. 083818-0261848 (TEN-005U).

Respectfully submitted
PILLSBURY WINTHROP LLP

By _____
Mark J. Danielson, Reg. No. 40,580

2475 Hanover Street
Palo Alto, CA 94304-1114
Tel: 650-233-4777
Fax: 650-233-454